



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/757,807 | 01/13/2004 | John L. Schantz | 200310109-1 | 5415 |

22879 7590 09/03/2008
HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

| |
|----------|
| EXAMINER |
|----------|

PARK, JUNG H

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2619

| | |
|-------------------|---------------|
| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

09/03/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/757,807 | Applicant(s) SCHANTZ, JOHN L. | |
| | Examiner JUNG PARK | Art Unit 2619 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Remark

1. This communication is considered fully responsive to the Amendment filed on 05/05/08.
 - a. The rejection under 112 2nd is withdrawn since it is being amended accordingly.
 - b. The Examiner acknowledges that RCE has been filed for reconsideration.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al. (US 2004/0022237, "Elliott").

Regarding claim 1, Elliott discloses an arrangement for coupling a SCP (Signaling Control Point) to signaling transfer point (STP) nodes of a SS7 network, comprising:

- an aggregated signaling gateway arrangement (ASGA) (network arrangement, see 104 fig.2A and 5A) including at least a first signaling gateway (a first SS7 gateway, see 208 fig.2A & 5A) and a second signaling gateway (a second SS7 gateway, see 210 fig.2A & 5A), the first signaling gateway being coupled between the SCP (SCP, see 214 fig.2A) and a first STP node (STP, see 250 fig.2A) of the SS7 network (SS7 network, see fig.2A), the second signaling gateway (note: 210 fig.2A) being coupled between the

Art Unit: 2619

SCP (SCP, see 214 fig.2A) and a second STP node (STP, see 252 fig.2A) of the SS7 network, and an SS7 point code comprising an identification code used to identify a node within an SS7 network (soft switch has a point code and the soft switch information includes an indication for identifying servicing code, see ¶.608 and ¶.613).

Elliott does not explicitly disclose, “the first signaling gateway and the second gateway being associated with a single SS7 point code”. However, in another embodiment, Elliott discloses that Soft switch has a point code and an alternate code (see 114 & 529 fig.5A; ¶.608, ln.12-15) and it is not required to have an alternative code point when the communication network system has reliability. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply only a single Soft Switch point code, i.e., a single SS7 point code corresponding to a single Soft Switch point code, in order to have benefits from economies of scale by requiring less interconnection link.

4. Claims 2-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al. (US 2004/0022237, “Elliott”) in view of Dantu et al. (US 7006433, “Dantu”).

Regarding claim 2, Elliott discloses voice-over-IP network using SS7 gateway (fig.2A and ¶.451), but lacks what Dantu discloses, “wherein the first signaling gateway and the second signaling gateway communicate with the SCP using SS7-over-IP (SS7-over-IP, see col.2, ln.32-60).” Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply Stream Control Transmission Protocol (SCTP) for transmitting SS7 signaling message across the network elements, i.e., SS7-over-IP, taught by Dantu into the network of Elliott in order to provide high reliability and high availability network (see col.2, ln.32-60).

Regarding claim 3, Elliott discloses, “wherein the first signaling gateway communicates with the first STP node using HSL (High Speed Link) (high speed packet switch, see ¶.645).”

Regarding claim 4, Elliott discloses, “wherein all communication links employed for transmitting SS7 messages between the first STP node and the SCP traverse the first signaling gateway (fig.2A and ¶.522, table 1).”

Regarding claim 5, Elliott discloses the 84 HSL links (¶.645), but does not explicitly disclose, “wherein the ASGA is capable of providing 32 HSL links of bandwidth into the SS7 network.” However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 32 HSL links of bandwidth in order to provide more flexibility according to network designer's need and such a modification would only require a simple change of existing links.

Regarding claim 6, it is a claim corresponding to claim 4 and is therefore rejected for the similar reasons set forth in the rejection of claim 4.

Regarding claim 7, Elliott lacks what Dantu discloses, “wherein each SS7 link between the SCP and the ASGA is mapped onto a SCTP (Stream Control Transport Protocol) connection (col.2, ln.38-41).” This claim is rejected for the same reasons and motivation set forth in the rejection of claim 2.

Art Unit: 2619

Regarding claim 8, it is a claim corresponding to claims 1 & 2 except the limitation of “an application server (a special application computer, see 214 fig.2A and ¶.11)” and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claim 9, Elliott discloses, “wherein the first signaling gateway and the second gateway are associated with a single SS7 point code (a single point code of a single SCP or Soft Switch associated with the first and second gateway, see 214 and 204 fig.2A), an SS7 point code comprising an identification code used to identify a node within an SS7 network (soft switch has a point code and the soft switch information includes an indication for identifying servicing code, see ¶.608 and ¶.613).”

Regarding claims 10-13, they are claims corresponding to claims 5, 3, 6, and 7, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 14, Elliott discloses that Digital PBX provides 24 digital channels at 56K per DS0, but does not explicitly disclose, “wherein the second signaling gateway communicates with the second STP node using 56 Kbits/second SS7 links.” However, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to apply 56 Kbps SS7 links between the second signaling gateway and the second STP node to access Public Switched Telephone Network (PSTN) in order to provide more flexibility according to network designer's need and utilize the existed

Art Unit: 2619

equipments to save cost and provide same service to current customers who satisfy with the low speed network equipments.

Regarding claim 15, it is a claim corresponding to claims 1 & 2 and is therefore rejected for the similar reasons set forth in the rejection of claims 1 and 2.

Regarding claims 16, 18, 19, 20, 21, & 22, they are claims corresponding to claims 9, 3, 6, 7, 3, & 14, respectively and are therefore rejected for the similar reasons set forth in the rejection of the claims.

Regarding claim 17, Elliott lacks what Dantu discloses, "wherein the ASGA is capable of providing a greater bandwidth throughput into the SS7 network than a maximum bandwidth throughput into the SS7 network of either one of the first signaling gateway and the second signaling gateway (not disrupt or degrade the capabilities of the signaling network, see col.2, ln.40-43). This claim is rejected for the same reasons and motivation set forth in the rejection of claim 7.

Regarding claim 23, Elliott discloses the backup call path (¶.1495), but does not explicitly disclose, "wherein the first signaling gateway is coupled to the first STP node via at least one active HSL link and at least one inactive 56 Kbits/second link." That is, there is a need to have a backup-signaling link for high-speed links for preventing network failure as taught by Elliott. Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include one active HSL link for data transfer and at least one inactive link as a backup link. The motivation of using

one inactive low speed link as a backup link is to save cost by using one of low speed links by utilizing the existed old link only for signaling.

Response to Arguments

5. Applicant's arguments filed have been fully considered but they are not persuasive.

At pages 7-8, 10, and 14, with respect to claims 1, 8, and 15, applicant argues that Elliott fails to disclose the limitations of "an aggregated signaling gateway arrangement (ASGA) including at least a first signaling gateway and a second signaling gateway, the first signaling gateway being coupled between the SCP and a first STP node of the SS7 network, the second signaling gateway being coupled between the SCP and a second STP node of the SS7 network."

In reply, the Elliott discloses signaling gateway network arrangement as described in 104 Fig.2A and 5A including a first signaling gateway 208 fig.2A & 5A and a second signaling gateway 210 fig.2A & 5A. The first signaling gateway being coupled between the SCP 214 fig.2A and a first STP node 250 fig.2A of the SS7 network fig.2A, the second signaling gateway being coupled between the SCP 214 fig.2A and a second STP node 252 fig.2A of the SS7 network, and an SS7 point code comprising an identification code used to identify a node within an SS7 network as described in ¶.608 and ¶.613. That is, the soft switch has a point code and the soft switch information includes an indication for identifying servicing code. Elliott does not explicitly disclose, "the first signaling gateway and the second gateway being associated with a single SS7 point code". However, in another embodiment, Elliott discloses that Soft switch has a point code and an alternate code as described in 114 & 529 Fig.5A and ¶.608, ln.12-15 and it is not required to have an alternative code point when the communication network

Art Unit: 2619

system has reliability. Therefore, ordinary skill in the art at the time of applicant's invention to apply only a single Soft Switch point code, i.e., a single SS7 point code corresponding to a single Soft Switch point code, in order to have benefits from economies of scale by requiring less interconnection link. Therefore, the examiner respectively disagrees.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jung Park whose telephone number is 571-272-8565. The examiner can normally be reached on Mon-Fri during 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jung Park
Patent Examiner

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619

Application/Control Number: 10/757,807
Art Unit: 2619

Page 9